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EXAMINER

RAO, ANAND SHASHIKANT

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2621

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Technology Center 2600

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/070,202
Filing Date: March 04, 2002
Appellant(s): LALLET ET AL.

Valerie Davis (#50,203)
For Appellant

EXAMINER'S ANSWER

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This is in response to the appeal brief filed on 12/30/06 appealing the rejection of claims 1-14 and 51-52 in the Office action mailed on 6/02/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellants' statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellants' statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,987,179

Riek et al.

11-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-14 and 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riek et al., (hereinafter referred to as "Riek").

Riek discloses an apparatus for controlling the amount of data used to transmit still images during or after the transmission of a video sequence from a first to a second location (Riek: column 4, lines 15-25; column 11, lines 5-10 and 45-50), the apparatus comprising: encoding means arranged for intraframe encoding still images (Riek: column 4, lines 35-40 and 53-56) for transmission and intraframe encoding part or all of selected video sequence frames (Riek: column 7, lines 40-50); calculating means for determining the data size (Riek: column 8, lines 6, lines 55-67) of intraframe encoded video sequence frames (Riek: column 6, lines 30-50), and control means for controlling intraframe encoding of still images for transmission in

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dependence on the determined intraframe encoded size of a previous video sequence frame (Riek: column 7, lines 40-50), as in claim 1. However, Riek fails to disclose intraframe only encoding of still images as in the claim. But the modification of Riek of to use intraframe only encoding for still images is a modification to Riek that would be readily apparent to one of ordinary skill in the art because it is merely the elimination of the use of P and B frames from the still frame encoding process and one that the courts have already established as obvious, *In re Karlson*, 136 USPQ 184 (CCPA) & *In re Wilson*, 153 USPQ 740 (CCPA 1967). Accordingly, given this established legal conclusion and Riek, it would have been obvious for one of ordinary skill in the art to eliminate P and B frames from the still frame encoding process of Riek in order to streamline the still frame encoding function by eliminating the need for motion compensation for still frame encoding (I frames require no motion compensation). The Riek apparatus, as modified to implement only I frame only still frame encoding, has all of the features of claim 1.

Regarding claim 2, the Riek apparatus, as modified to implement only I frame only still frame encoding, has that the encoding means is arranged to intraframe encode part or all of each video sequence frame and the control means is arranged to control intraframe only encoding of a still image in dependence on the determined size of the most recently intraframe encoded video sequence frame (Riek: column 4, lines 65-67; column 5, lines 1-20), as in the claim.

Regarding claim 3, the Riek apparatus, as modified to implement only I frame only still frame encoding, has wherein the control means is arranged to select a quantization factor for use in encoding of a still image in dependence on the determined intraframe encoded size of a previous video sequence frame (Riek: column 4, lines 50-60; column 7, lines 40-50), as in the claim.

Regarding claim 4, the Riek apparatus, as modified to implement only I frame only still frame encoding, has wherein the control means is arranged to select, in dependence on the determined intraframe encoded size of a previous video sequence frame (Riek: column 4, lines 55-61), a first quantization factor for use in encoding a first part of a still image and a second quantization factor for use in encoding a second part of a still image (Riek: column 5, lines 5-10), as in the claim.

Regarding claim 5, the Riek apparatus, as modified to implement only I frame only still frame encoding, has wherein that the encoding means is arranged to carry out an encoding process in which an image is considered to comprise a plurality of blocks, each of which is intraframe only encoded (Riek: column 5, lines 38-54), as in the claim.

Regarding claim 6, the Riek apparatus, as modified to implement only I frame only still frame encoding, has wherein that the control means is arranged to control intraframe only encoding of still images with the aim of keeping the data size of the encoded image within predetermined limits (Riek: column 7, lines 50-60).

Regarding claim 7, the Riek apparatus, as modified to implement only I frame only still frame encoding, has wherein that the encoding and transmission of the still images is compatible with the scheme used for encoding and transmitting of the video sequence (Riek: column 4, lines 25-35), as in the claim.

Riek discloses method for controlling the amount of data used to transmit still images during or after the transmission of a video sequence from a first to a second location (Riek: figures 3-6; column 11, lines 5-10 and 45-50), the method comprising the steps of: intraframe encoding (Riek: column 4, lines 35-40 and 53-56) part or all of selected video sequence frames

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(Riek: column 5, lines 25-55); determining the data size (Riek: column 6, lines 55-67) of intraframe encoded video sequence frames (Riek: column 6, lines 30-50), and when sending a still image, controlling intraframe encoding of said image in dependence on the determined intraframe encoded size of a previous video sequence frame (Riek: column 7, lines 40-50), as in claim 8. However, Riek fails to disclose intraframe only encoding of still images as in the claim. But the modification of Riek of to use intraframe only encoding for still images is a modification to Riek that would be readily apparent to one of ordinary skill in the art because it is merely the elimination of the use of P and B frames from the still frame encoding process and one that the courts have already established as obvious, *In re Karlson*, 136 USPQ 184 (CCPA) & *In re Wilson*, 153 USPQ 740 (CCPA 1967). Accordingly, given this established legal conclusion and Riek, it would have been obvious for one of ordinary skill in the art to eliminate P and B frames from the still frame encoding process of Riek in order to streamline the still frame encoding function by eliminating the need for motion compensation for still frame encoding (I frames require no motion compensation). The Riek method, as modified to implement only I frame only still frame encoding, has all of the features of claim 8.

Regarding claim 9, the Riek method, as modified to implement only I frame only still frame encoding, discloses intraframe only encoding part or all of each video sequence frame and controlling intraframe encoding of a still image in dependence on the determined size of the most recently intraframe encoded video sequence frame (Riek: column 4, lines 65-67; column 5, lines 1-20), as in the claim.

Regarding claim 10, the Riek method, as modified to implement only I frame only still frame encoding, discloses selecting a quantization factor for use in encoding a still image in

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dependence on the determined intraframe encoded size of a previous video sequence frame (Riek: column 4, lines 50-60; column 7, lines 40-50), as in the claim.

Regarding claim 11, the Riek method, as modified to implement only I frame only still frame encoding, discloses the step of selecting, in dependence on the determined intraframe encoded size of a previous video sequence frame (Riek: column 4, lines 55-61), a first quantization factor for use in encoding a first part of a still image and a second quantization factor for use in encoding a second part of a still image (Riek: column 5, lines 5-10, as in the claim.

Regarding claim 12, the Riek method, as modified to implement only I frame only still frame encoding, discloses that the encoding process is one in which an image is considered to comprise a plurality of blocks each of which is intraframe only encoded (Riek: column 5, lines 38-54), as in the claim

Regarding claim 13, the Riek method, as modified to implement only I frame only still frame encoding, discloses that the intraframe encoding of still images is conducted with the aim of keeping the data size of the encoded image within predetermined limits (Riek: column 7, lines 50-60).

Regarding claim 14, the Riek method, as modified to implement only I frame only still frame encoding, discloses that the encoding and transmission of the still images is compatible with the scheme used for encoding and transmitting of the video sequence (Riek: column 4, lines 25-35).

Regarding claim 51, the Riek apparatus, as modified to implement only I frame only still frame encoding, has encoding means arranged for intraframe only encoding still images for

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transmission (Riek: column 4, lines 15-25; column 11, lines 5-10 and 45-50), the encoding process being one in which a still image is considered to comprise a plurality of blocks each of which is intraframe only encoded (Riek: column 5, lines 25-38); calculating means for determining the data size of intraframe only encoded blocks (Riek: column 7, lines 55-67); and control means for controlling encoding of selected blocks in dependence on the determined data size of one or more previously encoded block (Riek: column 7, lines 40-50), as in the claim.

Regarding claim 52, the Riek apparatus, as modified to implement only I frame only still frame encoding, has encoding means arranged for intraframe only encoding still images for transmission (Riek: column 4, lines 15-25; column 11, lines 5-10 and 45-50), the encoding process being one in which a still image is considered to comprise a plurality of blocks each of which is intraframe only encoded (Riek: column 4, lines 35-40); calculating means for determining the data size of part of an intraframe encoded image comprising at least one intraframe only encoded block (Riek: column 7, lines 40-50); judging means for determining whether the determined data size of said part of an intraframe encoded image falls within a preselected range (Riek: column 7, lines 50-67); and control means for causing re-encoding of said part of an intraframe only coded frame (Riek: column 5, lines 53-57), prior to transmission, in such a way as to change the data size of said part of an intraframe coded image when the determined data size falls outside the preselected range (Riek: column 10, lines 40-67), as in the claim.

(10) Response to Argument

Appellants arguments filed on the Appeal Brief of 12/30/06 with respect to claims 1-14 and 51-52 have been fully considered but they are not persuasive.

The Appellant presents five substantive arguments contending the Examiner's rejection of claims 1-14 and 51-52 under 35 U.S.C. 103(a) as being unpatentable over Riek et al., (hereinafter referred to as "Riek"). However, after careful consideration of the arguments presented, the Examiner must respectfully disagree and respectfully submit to the Board that the rejections are correct and should be maintained.

After providing a summary of the instant invention (Brief of 12/30/06: page 4, lines 1-22; page 5, lines 1-8), providing the legal basis for the argument (Brief of 12/30/06: page 5, lines 12-21; page 6, lines 1-3) and a synopsis of the pending rejection (Brief of 12/30/06: page 6, lines 5-16), the Appellants argue that the Examiner has improperly relied upon the cited case law (Brief: page 6, lines 17-21; page 7, lines 1-8). The Examiner respectfully disagrees. As with nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). However, the test of non-analogous art would be based on ***art specific or teaching reliant modification for a specific reference***, and not to legal conclusions derived from case law history, *In re Wood* 599 F.2 1032, 1036, 202 USPQ 171, 174 (CCPA 1979). Legal conclusions for obviousness resulting from case law remain applicable across a wide range of technologies and fields of endeavor, and that is what the cited case law supports- that the elimination of an element and its function is obvious if the remaining elements perform the same function as before. Such legal conclusions are axiomatic, and not art specific or teaching reliant modifications, since these modifications (i.e. duplication parts for a multiplied effect, shift in the location of parts without changing the overall function, increase/decrease in size, and etc.) translate across many different areas of expertise. This point is efficiently pointed out by the Appellants in noting that the cited case law deals in the two instances with different fields of endeavor: a by-pass feeder for a water system, and a method for making an elastomeric resinous material. However, they support the same legal conclusion for obviousness- that the elimination of an element and its function is obvious if the

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remaining elements perform the same function as before. In the case of the instant invention, the modification to Riek for the elimination for P and B frames which would still allow for the coding of images with I frames as before, but now streamlines the coding process (I frames require no motion compensation as in P and B frames, and calculations for motion compensation can be computationally intensive). The Examiner would concur with the Appellants' position if the rejection actually took an art specific or teaching reliant modification from the by-pass feeder for a water system or the method for making an elastomeric resinous material, and then attempted to mesh this to the image coding technology of the Riek reference. However, this is not the case. The Examiner is reliant only upon the legal conclusions supported by cited case law history, and not upon the facts of the cases themselves. If we take the Appellants' position to its logical conclusion, then the test for obviousness would only apply to other applications relating to plow shanks, and that the test for analogous art would apply to only venturi carburetors. Accordingly, the Examiner maintains that the modification as based on established case law is appropriate, and should be maintained.

Secondly, the Appellants argue that Riek fails to establish a *prima facie* case of obviousness on its own because there is no suggestion therein to modify this reference to use only intraframe encoding of still images (Brief of 12/30/06: page 7, lines 9-14). The Examiner respectfully disagrees. It is noted that Riek clearly discloses disabling the motion estimation processing (Riek: column 6, lines 7-10) and suggests the elimination the production of "conventional" P and B frames (Riek: column 1, lines 40-60), and therefore clearly suggests the use of only intra-frame coded frames. Further, Riek even discloses the use of intracoded blocks in P and B frames as well (Riek: column 2, lines 1-10). That is, the use of more *intra-coded*

information at the expense of P and B information is clearly suggested, and therefore one of ordinary skill in the art as discussed above, would look towards the discussed elimination of such coding.

Additionally, the Appellant's argue that Riek fails to address the "for transmission..." limitation of instant invention (Brief of 12/30/06: page 7, lines 15-22). The Examiner respectfully disagrees. It is noted that the Riek reference discloses the use of an MPEG TM5 encoder (Riek: column 7, lines 35-45: TM5 stands for "test model 5"), which as one of ordinary skill in the art was modeled based on varying transmission bandwidth requirements, and is the governing rationale behind implementing bit rate control (Riek: column 10, lines 40-55). Also, the Examiner notes that the coded information generated by the MPEG-2 TM5 encoder has an associated decoder with it (Riek: column 11, lines 5-15), and further that Riek discloses that the information "conveyed to the decoder" which the Examiner asserts anticipates the use of the "for transmission" limitation as it relates the high-fidelity (i.e. still) image (Riek: column 11, lines 45-65). Accordingly, the Examiner maintains that the limitation is met.

Furthermore, the Appellants argue the Riek fails to disclose "calculating means for determining the data size only of intraframe encoded video sequences..." as in the claims (Brief of 12/30/06: page 8, lines 1-9; page 9, lines 4-11). The Examiner respectfully disagrees. The Examiner notes that Riek discloses calculations based on the standard GOP structure inclusive of a rule of thumb of ratios of I, B, P frames. However, with the suggested modification, M and N would be reduce to 0, and the actual values of the I frames would based on the default values of associated with the TM5 coder setup (Riek: column 7, lines 60-65: 400Kb) for the first I frame, with 1.35 Mb to be distributed over the rest of the rest of the I frames (Riek: column 7, lines 45-

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50) while incorporating rate control throughout the GOP (Riek: column 10, lines 40-65). As such, the Examiner maintains that the limitation would be met with the suggested modification.

Lastly, the Appellants argue that Riek “control means for controlling the intraframe only encoding of still images for transmission in dependence on the determined intraframe encoded size of a previous video sequence...” as in the claims (Brief of 12/30/06: page 8, lines 10-23), as in the claim. The Examiner respectfully disagrees. It is noted that the coding of enhancement pictures depends on already coded previous pictures of a GOP (Riek: column 5, lines 55-65). Accordingly, the Examiner maintains that this limitation is met, as well.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

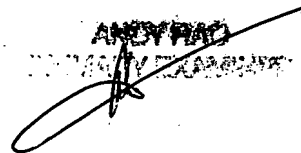
Conclusion

For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,

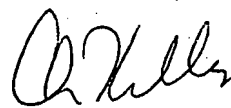
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April 19, 2007

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